

Large B-Cell Lymphoma treatment outcome gene markers: genes whose expression is increased in low risk and decreased in high risk individuals

Gene Description

U43519 DRP2 Dystrophin related protein 2
Y09836 3'UTR of unknown protein
HG2314-HT2410 4-Beta-Galactosyltransferase
Z15114 PRKCG Protein kinase C, gamma
U12767 Mitogen induced nuclear orphan receptor (MINOR) mRNA
X77307 5-HYDROXYTRYPTAMINE 2B RECEPTOR
L40377 Cytoplasmic antiproteinase 2 (CAP2) mRNA
Z30644 Chloride channel (putative) 2163bp
L07765 CES2 Carboxylestease 2 (liver)
Z83802 Axonemal dynein heavy chain (partial, ID hdhc3)
M24736_s SELE Selectin E (endothelial adhesion molecule 1)
U04898 RORA RAR-related orphan receptor A
X70683 SOX4 SRY (sex determining region Y)-box 4
D87468 KIAA0278 gene, partial cds
J03242_s IGF2 Insulin-like growth factor 2 (somatomedin A)
Z95624 DNA sequence from cosmid U237H1 contains Ras like GTPase and ESTs
U96781_cds1 Ca2+ ATPase of fast-twitch skeletal muscle sarcoplasmic reticulum adult and neonatal isoforms (ATP2A1) gene
HG3227-HT3404 Guanine Nucleotide-Binding Protein Hsr1
Y10262_s EYA3 gene
U79271 Clones 23920 and 23921 mRNA sequence
U82535 Fatty acid amide hydrolase mRNA
L04751 CYP4A11 Cytochrome P450, subfamily IVA, polypeptide 11
X17254 GATA1 Transcription factor Bryf1
U46752 Phosphotyrosine independent ligand p62B B-cell isoform for the Lck SH2 domain mRNA, partial cds
U48437 Amyloid precursor-like protein 1 mRNA
D50402 NRAMP1 Natural resistance-associated macrophage protein 1 (might include Leishmaniasis)
U49082 Transporter protein (gl7) mRNA
M37763 Neurotrophin-3 (NT-3) gene
U18548 GPR12 G protein coupled-receptor gene
M17863_s IGF2 Insulin-like growth factor 2 (somatomedin A)
M86383_s Nicotinic acetylcholine receptor alpha 3 subunit precursor, mRNA
HG2415-HT2511 Transcription Factor E2f-2
M35531 FUT1 Fucosyltransferase 1 (galactoside 2-alpha-L-fucosyltransferase, Bombay phenotype included)
X13955_s MYL4 Myosin, light polypeptide 4, alkali; atrial, embryonic
HG4660-HT5073 Microtubule-Associated Protein 1b
J05036_s CTSE Cathepsin E
U05861 DDH1 Dihydrodiol dehydrogenase
U50743 Na,K-ATPase gamma subunit mRNA
D87937 Alpha(1,2)fucosyltransferase, 5'UTR partial sequence
M14123_xpt2 No description available for M14123
M63904 GNA15 Guanine nucleotide binding protein (G protein), alpha 15 (Gq class)
AFFX-HUMRGE/M10098_3 AFFX-HUMRGE/M10098 (endogenous control)
X54925 MMP1 Matrix metalloproteinase 1 (interstitial collagenase)
M16441_cds1 Description for M16441 (clusters Hs.36 Hs.2037) not available
U00930 Clone CE29 8.1 (CAC)n/(GTG)n repeat-containing mRNA
AFFX-LysX-5 AFFX-LysX-5 (endogenous control)
HG3264-HT3441 Af-6 (Gb:U02478)
L11672 ZNF91 Zinc finger protein 91 (HPF7, HTF10)
D25217 KIAA0027 gene, partial cds
U11862_s ABP1 Amiloride binding protein 1 (amine oxidase (copper-containing))

Figure 1

FIGURE 1

Large B-Cell Lymphoma treatment outcome gene markers: genes whose expression is decreased in low risk and increased in high risk individuals

Gene Description

U83908 Nuclear antigen H731 mRNA
M99435 TRANSDUCIN-LIKE ENHANCER PROTEIN 1
L20971 PDE4B Phosphodiesterase 4B, cAMP-specific (dunce (Drosophila)-homolog phosphodiesterase E4)
AC002450 BAC clone GS244B22 from 7q21-q22, complete sequence
M18255_cds2_s PRKACB gene (protein kinase C-beta-2) extracted from Human protein kinase C beta 1 and 2 genes, next to last
U09550 Oviductal glycoprotein mRNA
U02609 Transducin-like protein mRNA
U38864 Zinc-finger protein C2H2-150 mRNA
U50360_s Calcium, calmodulin-dependent protein kinase II gamma mRNA, partial cds
U65093 Msg1-related gene 1 (mrg1) mRNA
M55531 SLC2A5 Solute carrier family 2 (facilitated glucose transporter), member 5
D16480 HADHA Hydroxyacyl-Coenzyme A dehydrogenase/3-ketoacyl-Coenzyme A thiolase/enoyl-Coenzyme A hydratase (trifunctional protein), alpha subunit
X89750 TGIF protein
HG4638-HT5050 Spliceosomal Protein Sap 49
AFFX-HUMISGF3A/M97935_5 AFFX-HUMISGF3A/M97935 (endogenous control)
AFFX-HUMISGF3A/M97935_MA AFFX-HUMISGF3A/M97935_MA (endogenous control)
HG4322-HT4592 Tubulin, Beta
D87735 CAG-isl 7 {trinucleotide repeat-containing sequence} [human, pancreas, mRNA Partial, 701 nt]
U20230 Guanyl cyclase C gene, partial cds
U97502_rna1 Butyrophilin protein (BT3.3) mRNA, partial cds
M55683 CRTM Cartilage matrix protein
X58399 L2-9 transcript of unrearranged immunoglobulin V(H)5 pseudogene
D86969 KIAA0215 gene
U60415 BHLH-PAS protein JAP3 mRNA
U60276 HASNA-I mRNA
D86959 KIAA0204 gene
M12625 Lecithin-cholesterol acyltransferase mRNA, with 5' and 3' flanking DNA sequences
X17644_s GSPT1 G1 to S phase transition 1
AFFX-HUMGAPDH/M33197_M AFFX-HUMGAPDH/M33197_M (endogenous control)
U52111_rna3 Description for U52111 (clusters Hs.21895 Hs.54478 Hs.75253 Hs.76225 Hs.79119 Hs.79188) not available
Z12173 GNS Glucosamine (N-acetyl)-6-sulfatase (Sanfilippo disease IIID)
U48730 Transcription factor Stat5b (stat5b) mRNA
X06318 PRKCB1 Protein kinase C, beta 1
S74221 IK
J05448 POLR2C RNA polymerase II, polypeptide C (33kD)
M27281 VEGF Vascular endothelial growth factor
X63468 GTF2E1 General transcription factor TFIIE alpha subunit, 56 kD
U19180 BAGE B melanoma antigen
U26727 CDKN2A Cyclin-dependent kinase inhibitor 2A (melanoma, p16, inhibits CDK4)

Figure 2A

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Inventors: Todd R. Golub *et al.*

M36067 LIG1 Ligase I, DNA, ATP-dependent
U71598 Zinc finger protein zfp2 (zf2) mRNA, partial cds
U73167_cds5 Description for U73167 (clusters Hs.22919 Hs.22919 Hs.75619
Hs.82222) not available
J03798 SMALL NUCLEAR RIBONUCLEOPROTEIN SM D1
U48213 DBP Albumin D-box binding protein
X91249 WHITE PROTEIN HOMOLOG
AB002314 KIAA0316 gene
X93017 Ncx2 gene (exon 2)
X07109 (clones lambda-hPKC-beta[15,802]) protein kinase C-beta-1 (PRKCB1)
mRNA
M55905 ME2 Malic enzyme 2, mitochondrial
M92439 130 KD LEUCINE-RICH PROTEIN

U73167_cds5

Figure 2B

Genes With High Expression in Large B-Cell (LBC) and Low Expression in Follicular (FSCC)

Gene	Description
1 X02152	LDHA Lactate dehydrogenase A
2 M14328_s	ENO1 Enolase 1, (alpha)
3 X56494	PKM2 Pyruvate kinase, muscle
4 J03909	GAMMA-INTERFERON-INDUCIBLE PROTEIN IP-30 PRECURSOR
5 L17131_mal	HMG1Y High mobility group (nonhistone chromosomal) protein isoforms I and Y
6 M57710	LGALS3 Lectin, galactoside-binding, soluble, 3 (galectin 3) (NOTE: redefinition of symbol)
7 HG417-HT417_s	Cathepsin B
8 HG1980-HT2023	Tubulin, Beta 2
9 V00594_s	Metallothionein isoform 2
10 M63138	CTSD Cathepsin D (lysosomal aspartyl protease)
11 U14518	CENPA Centromere protein A (17kD)
12 D82348	5-aminoimidazole-4-carboxamide-1-beta-D-ribose nucleotide transformylase/inosinase
13 HG2279-HT2375	Triosephosphate Isomerase
14 X62078	GM2A GM2 ganglioside activator protein
15 M20471	CLTA Clathrin light chain A
16 M22382	HSPD1 Heat shock 60 kD protein 1 (chaperonin)
17 J04173	PGAM1 Phosphoglycerate mutase 1 (brain)
18 D79997	KIAA0175 gene
19 U28386	RCH1 RAG (recombination activating gene) cohort 1
20 L33842_mal	IMPDH2 IMP (inosine monophosphate) dehydrogenase 2
21 X12447	ALDOA Aldolase A
22 X16396	MTHFD NAD-dependent methylene tetrahydrofolate dehydrogenase cyclohydrolase
23 L02426	26S PROTEASE REGULATORY SUBUNIT 4
24 X15183	60S RIBOSOMAL PROTEIN L13
25 X17620	NME1 Non-metastatic cells 1, protein (NM23A) expressed in
26 D55716	DNA REPLICATION LICENSING FACTOR CDC47 HOMOLOG
27 X67951	PAGA Proliferation-associated gene A (natural killer-enhancing factor A)
28 U12595	Tumor necrosis factor type 1 receptor associated protein (TRAP1) mRNA, partial cds
29 X17567_s	SNRNPB Small nuclear ribonucleoprotein polypeptides B and B1

Figure 3A

FIGURE 3B

30	HG4074-HT4344	Rad2
31	L19686_mal	MIF Macrophage migration inhibitory factor
32	D25328	PFKP Phosphofructokinase, platelet
33	J02783	P4HB Procollagen-proline, 2-oxoglutarate 4-dioxygenase (proline 4-hydroxylase), beta polypeptide (protein disulfide isomerase; thyroid hormone binding protein p55)
34	M25753	G2/MITOTIC-SPECIFIC CYCLIN B1
35	U29680	Bcl-2 related (Bfl-1) mRNA
36	Z50115_s	Thimet oligopeptidase (metalloproteinase)
37	J04988	90-kDa heat-shock protein gene, cDNA
38	D43950	T-COMPLEX PROTEIN 1, EPSILON SUBUNIT
39	D45248	Proteasome activator hPA28 subunit beta
40	D13633	KIAA0008 gene
41	X74801	T-COMPLEX PROTEIN 1, GAMMA SUBUNIT
42	L25876	Protein tyrosine phosphatase (CIP2)mRNA
43	U40369_mal	SAT Spermidine/spermine N1-acetyltransferase
44	X01060	TFRC Transferrin receptor (p90, CD71)
45	U53347	Neutral amino acid transporter B mRNA
46	X69433	IDH2 Isocitrate dehydrogenase 2 (NADP+), mitochondrial
47	L06419	PLOD Lysyl hydroxylase
48	M16591_s	HCK Hemopoietic cell kinase
49	U81375	Placental equilibrative nucleoside transporter 1 (hENT1) mRNA
50	D29958	KIAA0116 gene, partial cds

Figure 3B

Genes With Low Expression in Large B-Cell (LBC) and High Expression in Follicular (FSCC)

Gene	Description
1 Z21966	POU6F1 POU homeobox protein
2 X16983	ITGA4 Integrin, alpha 4 (antigen CD49D, alpha 4 subunit of VLA-4 receptor)
3 M94880_f	HLA-A MHC class I protein HLA-A (HLA-A28, -B40, -Cw3)
4 X03689_s	mRNA fragment for elongation factor TU (N-terminus)
5 Z11793	Selenoprotein P
6 AB002409	SLC
7 D87119	Cancellous bone osteoblast mRNA for GS3955
8 AFFX-HSAC07/X00351_5	AFFX-HSAC07/X00351 (endogenous control)
9 L42324	(clone GPCR W) G protein-linked receptor gene (GPCR) gene, 5' end of cds
10 U46006_s	Smooth muscle LIM protein (h-SmLIM) mRNA
11 L19314	HRV gene
12 HG3928-HT4198	Surfactant Protein Sp-A1 Delta
13 X91911_s	Glioma pathogenesis-related protein (GliPR) mRNA
14 L42621	Ly-9 mRNA
15 S73591	Brain-expressed HHCPA78 homolog [human, HL-60 acute promyelocytic leukemia cells, mRNA, 2704 nt]
16 X86098	BS69 protein
17 U64863	HPD-1 (hPD-1) mRNA
18 M63379	CLU Clusterin (complement lysis inhibitor; testosterone-repressed prostate message 2; apolipoprotein J)
19 U16307	Glioma pathogenesis-related protein (GliPR) mRNA
20 D78134	YWHAZ Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta polypeptide
21 Z35227	TTF mRNA for small G protein
22 Z30426	CD69 antigen (early T cell activation antigen)

Figure 4A

23	Z33642	V7 mRNA for leukocyte surface protein
24	M59829	MHC class III HSP70-HOM gene (HLA)
25	Z49269	Chemokine HCC-1
26	AC002073_cds1	Description for AC002073 (clusters Hs.75338 Hs.75338 Hs.100359) not available
27	U19345	AR1 protein (AR) mRNA
28	Z33905	43kD acetylcholine receptor-associated protein (Rapsyn)
29	U69108	TNF receptor associated factor 5 mRNA, partial cds
30	M99701	(pp21) mRNA
31	X85785_ma1	Duffy blood group antigen (Fya-b++) mRNA
32	S57212_s	MEF2C MADS box transcription enhancer factor 2, polypeptide C (myocyte enhancer factor 2C)
33	L15309	ZNF141 Zinc finger protein 141 (clone pHZ-44)
34	HG3635-HT3845_f	Zinc Finger Protein, Kruppel-Like
35	L10615_s	CSN2 Beta-casein
36	HG3254-HT3431	Phosphatidylinositol 3-Kinase P110, Beta Isoform
37	X00437_s	TCRB T-cell receptor, beta cluster
38	X77922_s	SIAT8 Sialyltransferase 8 (alpha-N-acetylneuraminate: alpha-2,8-sialyltransferase, GD3 synthase)
39	AF008937	Syntaxin-16C mRNA
40	U96113	Nedd-4-like ubiquitin-protein ligase WWP1 mRNA, partial cds
41	Z50781	Leucine zipper protein
42	X03934	T-cell antigen receptor gene T3-delta
43	U56814	DNaseI-Like III protein (DNAS1L3) mRNA
44	L27071	TXK TXK tyrosine kinase
45	M23323_s	T-CELL SURFACE GLYCOPROTEIN CD3 EPSILON CHAIN PRECURSOR
46	D31797	CD40LG CD40 antigen ligand (hyper IgM syndrome)
47	Z26634	ANK2 Ankyrin 2 (neuronal)
48	U72935_cds3_s	ATRX gene (putative DNA dependent ATPase and helicase) extracted from Human putative DNA dependent ATPase and helicase (ATRX) gene
49	Y09392_s	WSL-LR, WSL-S1 and WSL-S2 proteins
50	M57703_s	PMCH Pro-melanin-concentrating hormone

Figure 4B